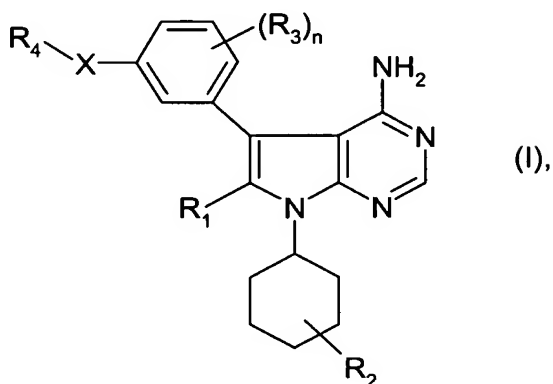


**Amendments to the Claims:**

**Listing of Claims:**

**Claims:**

Claim 1 (original): A compound of formula I



wherein

n is from 0 to 4,

R<sub>1</sub> is hydrogen, unsubstituted or substituted lower alkyl or halogen,

R<sub>2</sub> is hydroxy; unsubstituted, mono- or disubstituted amino; a heterocyclic radical containing at least one nitrogen ring atom and being attached to the cyclohexane ring of the molecule of formula I via a nitrogen ring atom; a radical R<sub>5</sub>-(C=Y)-NH-, wherein R<sub>5</sub> is unsubstituted or substituted lower alkyl, unsubstituted, mono- or disubstituted amino, a heterocyclic radical, or etherified hydroxy, and Y is oxygen, sulfur or imino; or a radical R<sub>6</sub>-sulfonylamino, wherein R<sub>6</sub> is unsubstituted or substituted lower alkyl, unsubstituted, mono- or disubstituted amino or phenyl optionally substituted by lower alkyl, lower alkoxy or nitro,

R<sub>3</sub> is lower alkyl, hydroxy-, amino- or halogen-substituted lower alkyl, hydroxy, cyano, lower alkoxy, lower alkanoyl, lower alkanoyloxy, amino, mono- or di-lower alkylamino, lower alkanoylamino, carboxy, lower alkoxycarbonyl or halogen, wherein the R<sub>3</sub> substituents can be selected independently of one another if n>1,

R<sub>4</sub> is a radical R<sub>7</sub>-CR<sub>8</sub>(R<sub>9</sub>)-, wherein R<sub>7</sub> is cyclobutyl, cyclopentyl, cyclohexyl, phenyl, furyl, pyrrolyl, thienyl or pyridyl, said R<sub>7</sub> substituents being optionally substituted by one or more radicals selected from lower alkyl and halogen, and R<sub>8</sub> and R<sub>9</sub> are independently of each other hydrogen, lower alkyl or halogen, and

X is selected from -O-, -NH- and -S-,

or a salt thereof.

Claim 2 (original): A compound of formula I according to claim 1, wherein

n is from 0 to 4,

R<sub>1</sub> is hydrogen, unsubstituted or substituted lower alkyl or halogen,

R<sub>2</sub> is hydroxy; unsubstituted, mono- or disubstituted amino; a heterocyclic radical containing at least one nitrogen ring atom and being attached to the cyclohexane ring of the molecule of formula I via a nitrogen ring atom; a radical R<sub>5</sub>-(C=Y)-NH-, wherein R<sub>5</sub> is unsubstituted or substituted lower alkyl, unsubstituted, mono- or disubstituted amino, a heterocyclic radical, or etherified hydroxy, and Y is oxygen, sulfur or imino; or a radical R<sub>6</sub>-sulfonylamino, wherein R<sub>6</sub> is unsubstituted or substituted lower alkyl, unsubstituted, mono- or disubstituted amino or phenyl optionally substituted by lower alkyl, lower alkoxy or nitro,

R<sub>3</sub> is lower alkyl or lower alkoxy, wherein the R<sub>3</sub> substituents can be selected independently of one another if n>1,

R<sub>4</sub> is a radical R<sub>7</sub>-CR<sub>8</sub>(R<sub>9</sub>)-, wherein R<sub>7</sub> is cyclobutyl, cyclopentyl, cyclohexyl, phenyl, furyl, pyrrolyl, thienyl, pyridyl or phenyl substituted by one or more radicals selected from lower alkyl and halogen, and R<sub>8</sub> and R<sub>9</sub> are independently of each other hydrogen, lower alkyl or halogen, and

X is selected from -O-, -NH- and -S-,

or a salt thereof.

Claim 3 (original): A compound of formula I according to claim 1, wherein

n is 0,

R<sub>1</sub> is hydrogen, unsubstituted or substituted lower alkyl or halogen,

R<sub>2</sub> is hydroxy; unsubstituted, mono- or disubstituted amino; a heterocyclic radical containing at least one nitrogen ring atom and being attached to the cyclohexane ring of the molecule of formula I via a nitrogen ring atom; a radical R<sub>5</sub>-(C=Y)-NH-, wherein R<sub>5</sub> is unsubstituted or substituted lower alkyl, unsubstituted, mono- or disubstituted amino, a heterocyclic radical, or etherified hydroxy, and Y is oxygen, sulfur or imino; or a radical R<sub>6</sub>-sulfonylamino, wherein R<sub>6</sub> is unsubstituted or substituted lower alkyl, unsubstituted, mono- or disubstituted amino or phenyl optionally substituted by lower alkyl, lower alkoxy or nitro,

R<sub>4</sub> is benzyl, and

X is selected from -O-, -NH- and -S-,

or a salt thereof.

Claim 4 (original): A compound of formula I according to claim 1, wherein n is 0,

R<sub>1</sub> is hydrogen, unsubstituted or substituted lower alkyl or halogen,

R<sub>2</sub> is hydroxy; unsubstituted, mono- or disubstituted amino; a heterocyclic radical having from 4 to 8 ring members and from 1 to 3 heteroatoms whereby at least one heteroatom is nitrogen and the binding of the heterocyclic radical to the cyclohexane ring of the molecule of formula I occurs via a nitrogen ring atom; a radical R<sub>5</sub>-(C=Y)-NH-, wherein R<sub>5</sub> is lower alkyl, unsubstituted, mono- or disubstituted amino, etherified hydroxy, a heterocyclic radical having from 4 to 8 ring members and from 1 to 3 heteroatoms whereby at least one heteroatom is nitrogen and the binding of the heterocyclic radical occurs via a nitrogen ring atom, lower alkyl substituted by said heterocyclic radical or by one or more radicals selected independently of one another from the group consisting of amino, N-lower alkylamino, N,N-di-lower alkylamino, N-lower alkanoylamino, N,N-di-lower alkanoylamino, hydroxy, lower alkoxy, lower alkoxy-lower alkoxy, lower alkanoyl, lower alkanoyloxy, cyano, nitro, carboxy, lower alkoxy-carbonyl, carbamoyl, amidino, guanidino, ureido, mercapto, lower alkylthio and halogen, and Y is oxygen, sulfur or imino; or a radical R<sub>6</sub>-sulfonylamino, wherein R<sub>6</sub> is unsubstituted or substituted lower alkyl, unsubstituted, mono- or disubstituted amino or phenyl optionally substituted by lower alkyl, lower alkoxy or nitro,

R<sub>4</sub> is benzyl, and

X is selected from -O-, -NH- and -S-,  
or a salt thereof.

Claim 5 (original): A compound of formula I according to claim 1, wherein n is 0,

R<sub>1</sub> is hydrogen, lower alkyl or halogen,

R<sub>2</sub> is hydroxy; unsubstituted, mono- or disubstituted amino; a heterocyclic radical having from 4 to 8 ring members and from 1 to 3 heteroatoms whereby at least one heteroatom is nitrogen and the binding of the heterocyclic radical to the cyclohexane ring of the molecule of formula I occurs via a nitrogen ring atom; a radical R<sub>5</sub>-(C=Y)-NH-, wherein R<sub>5</sub> is lower alkyl, unsubstituted or monosubstituted amino, etherified hydroxy, or lower alkyl substituted by a heterocyclic radical having from 4 to 8 ring members and from 1 to 3 heteroatoms whereby at least one heteroatom is nitrogen and the binding of the heterocyclic radical occurs via a nitrogen ring atom, and Y is oxygen or imino; or a radical R<sub>6</sub>-sulfonylamino, wherein R<sub>6</sub> is lower alkyl or disubstituted amino,

R<sub>4</sub> is benzyl, and

X is selected from -O-, -NH- and -S-,  
or a salt thereof.

Claim 6 (original): A compound of formula I according to claim 1, wherein  
n is 0,

R<sub>1</sub> is hydrogen, lower alkyl or halogen,

R<sub>2</sub> is hydroxy, amino, N,N-di-lower alkylamino, pyrimidinyl-amino, 1,4,5,6-tetrahydro-pyrimidinyl-amino, 4,5-dihydro-1H-imidazolyl-amino, azetidin-1-yl, pyrrolidin-1-yl, 1-piperidyl, lower alkyl-piperazin-1-yl, morpholin-4-yl, thiomorpholin-4-yl; a radical R<sub>5</sub>-(C=Y)-NH-, wherein R<sub>5</sub> is lower alkyl, lower alkoxy, amino, N-lower alkylamino, N-(phenyl-lower alkyl)-amino, N-(lower alkyl-phenyl-lower alkyl)-amino, N-(lower alkoxy-phenyl-lower alkyl)-amino, N-(morpholin-4-yl-lower alkyl)-amino, N-(N',N'-di-lower alkylamino-lower alkyl)-amino, lower alkoxy-lower alkoxy, 1-piperidyl-lower alkyl, morpholin-4-yl-lower alkyl or lower alkyl-piperazin-1-yl-lower alkyl, and Y is oxygen or imino; or a radical R<sub>6</sub>-sulfonylamino, wherein R<sub>6</sub> is lower alkyl or N,N-di-lower alkylamino,

R<sub>4</sub> is benzyl, and

X is -O-,

or a salt thereof.

Claim 7 (original): A compound of formula I according to claim 1, selected from the group consisting of

cis-4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexanol;

trans-4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexanol;

cis-5-(3-benzyloxy-phenyl)-7-(4-piperidin-1-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;

trans-5-(3-benzyloxy-phenyl)-7-(4-piperidin-1-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;

cis-5-(3-benzyloxy-phenyl)-7-(4-pyrrolidin-1-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;

trans-5-(3-benzyloxy-phenyl)-7-(4-pyrrolidin-1-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;

cis-5-(3-benzyloxy-phenyl)-7-[4-(4-methyl-piperazin-1-yl)-cyclohexyl]-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;

trans-5-(3-benzyloxy-phenyl)-7-[4-(4-methyl-piperazin-1-yl)-cyclohexyl]-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;

cis-5-(3-benzyloxy-phenyl)-7-(4-morpholin-4-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 trans-5-(3-benzyloxy-phenyl)-7-(4-morpholin-4-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 cis-7-(4-azetidin-1-yl-cyclohexyl)-5-(3-benzyloxy-phenyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 trans-7-(4-azetidin-1-yl-cyclohexyl)-5-(3-benzyloxy-phenyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 cis-5-(3-benzyloxy-phenyl)-7-(4-thiomorpholin-4-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 trans-5-(3-benzyloxy-phenyl)-7-(4-thiomorpholin-4-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 trans-5-(3-benzyloxy-phenyl)-7-(4-diethylamino-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 cis-7-(4-amino-cyclohexyl)-5-(3-benzyloxy-phenyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 trans-7-(4-amino-cyclohexyl)-5-(3-benzyloxy-phenyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 cis-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-carbamic acid methyl ester;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-methyl-urea;  
 cis-N-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-2-piperidin-1-yl-acetamide;  
 cis-N-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-2-morpholin-4-yl-acetamide;  
 cis-N-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-2-(4-methyl-piperazin-1-yl)-acetamide;  
 cis-5-(3-benzyloxy-phenyl)-7-[4-(pyrimidin-2-ylamino)-cyclohexyl]-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 cis-5-(3-benzyloxy-phenyl)-7-[4-(1,4,5,6-tetrahydro-pyrimidin-2-ylamino)-cyclohexyl]-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 cis-5-(3-benzyloxy-phenyl)-7-[4-(4,5-dihydro-1H-imidazol-2-ylamino)-cyclohexyl]-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 cis-N-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-methanesulfonamide;  
 cis-N-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-N,N-dimethylaminosulfonamide;

cis-5-(3-benzyloxy-phenyl)-7-(4-dimethylamino-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
 N-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-acetamide;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-ethyl-urea;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-isopropyl-urea;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-propyl-urea;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-butyl-urea;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-(3-methyl-benzyl)-urea;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-benzyl-urea;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-(4-methoxy-benzyl)-urea;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-tert-butyl-urea;  
 cis- N-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-guanidine;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-(2-dimethylamino-ethyl)-urea;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-(2-morpholin-4-yl-ethyl)-urea;  
 cis-1-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-3-(3-morpholin-4-yl-propyl)-urea;  
 cis-{4-[4-amino-5-(3-benzyloxy-phenyl)-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexyl}-carbamic acid 2-methoxy-ethyl ester;  
 cis-4-[4-amino-5-(3-benzyloxy-phenyl)-6-bromo-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexanol;  
 trans-4-[4-amino-5-(3-benzyloxy-phenyl)-6-bromo-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexanol;  
 cis-4-[4-amino-5-(3-benzyloxy-phenyl)-6-methyl-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexanol;  
 trans-4-[4-amino-5-(3-benzyloxy-phenyl)-6-methyl-pyrrolo[2,3-d]pyrimidin-7-yl]-cyclohexanol;  
 trans-5-(3-benzyloxy-phenyl)-6-methyl-7-[4-(4-methyl-piperazin-1-yl)-cyclohexyl]-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;

trans-5-(3-benzyloxy-phenyl)-7-(4-dimethylamino-cyclohexyl)-6-methyl-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
trans-5-(3-benzyloxy-phenyl)-7-(4-diethylamino-cyclohexyl)-6-methyl-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
trans-5-(3-benzyloxy-phenyl)-6-methyl-7-(4-pyrrolidin-1-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
trans-5-(3-benzyloxy-phenyl)-6-methyl-7-(4-morpholin-4-yl-cyclohexyl)-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
trans-7-(4-azetidin-1-yl-cyclohexyl)-5-(3-benzyloxy-phenyl)-6-methyl-7H-pyrrolo[2,3-d]pyrimidin-4-ylamine;  
and pharmaceutically acceptable salts thereof.

Claim 8 (currently amended): A compound of formula I, or a pharmaceutically acceptable salt thereof, according to ~~any one of claims 1 to 7~~ claim 1 for use in a method for the treatment of the human or animal body.

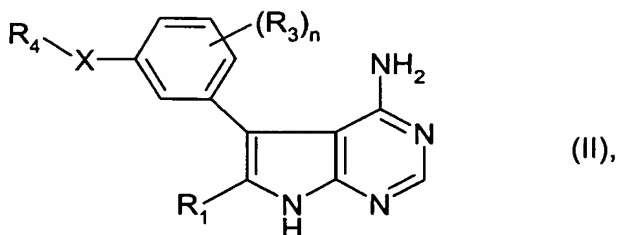
Claim 9 (currently amended): A pharmaceutical composition comprising a compound of formula I or a pharmaceutically acceptable salt thereof according to ~~any one of claims 1 to 7~~ claim 1, together with at least one pharmaceutically acceptable carrier.

Claim 10 (currently amended): Use of A method for the treatment of a disease which responds to an inhibition of IGF-IR-dependent cell proliferation comprising administering a compound of formula I according to any one of claims 1 to 7 claim 1, or a pharmaceutically acceptable salt thereof. [[,]] for the preparation of a pharmaceutical composition for the treatment of a disease which responds to an inhibition of the IGF-IR dependent cell proliferation.

Claim 11 (currently amended): Use of A method for the treatment of a disease which responds to an inhibition of IGF-IR tyrosine kinase comprising administering a compound of formula I according to any one of claims 1 to 7 claim 1, or a pharmaceutically acceptable salt thereof. [[,]] for the preparation of a pharmaceutical composition for the treatment of a disease which responds to an inhibition of the IGF-IR tyrosine kinase.

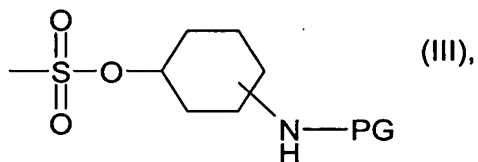
Claim 12 (original): A process for the preparation of a compound of formula I according to claim 1 or of a salt of such a compound, characterized in that

a) in order to prepare a compound of formula I, in which  $R_2$  is hydroxy, a compound of formula II



wherein  $n$ ,  $R_1$ ,  $R_3$ ,  $R_4$  and  $X$  have the meanings as defined for a compound of formula I, is reacted with methanesulfonic acid hydroxy-cyclohexyl ester;

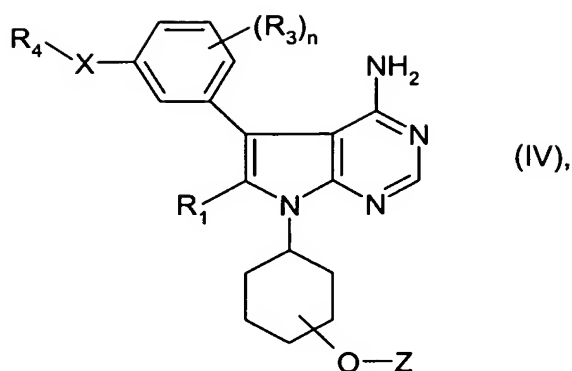
b) in order to prepare a compound of formula I, in which  $R_2$  is amino, a compound of formula II, wherein  $n$ ,  $R_1$ ,  $R_3$ ,  $R_4$  and  $X$  have the meanings as defined for a compound of formula I, is reacted in a first step with a compound of formula III



wherein PG is an amino protecting group which is removed in a second step;

c) in order to prepare a compound of formula I, in which  $R_2$  is mono- or disubstituted amino or a heterocyclic radical containing at least one nitrogen ring atom and being attached to the cyclohexane ring of the molecule of formula I via a nitrogen ring atom, a compound of formula IV,

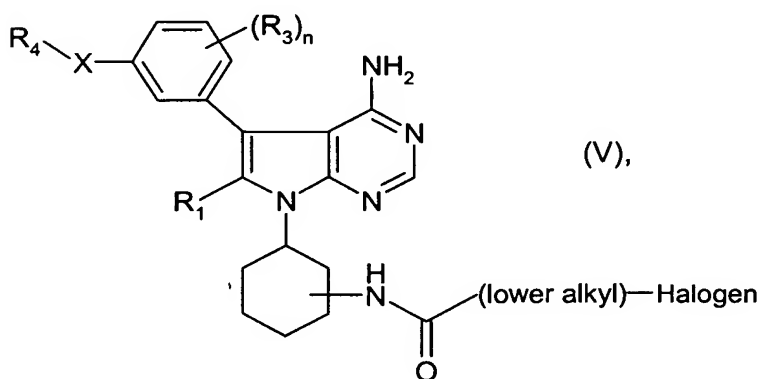




wherein  $n$ ,  $R_1$ ,  $R_3$ ,  $R_4$  and  $X$  have the meanings as defined for a compound of formula I and  $-O-Z$  is a leaving group, is reacted with a compound of the formula  $R_{10}-H$  in which  $R_{10}$  is mono- or disubstituted amino or a heterocyclic radical containing at least one nitrogen ring atom wherein the heterocyclic radical is attached to the hydrogen atom of  $R_{10}-H$  via a nitrogen ring atom;

d) in order to prepare a compound of formula I, in which  $R_2$  is a radical  $R_5-(C=Y)-NH-$  wherein  $R_5$  is unsubstituted or substituted lower alkyl and  $Y$  is oxygen, a compound of formula I, in which  $R_2$  is amino, is reacted with a compound of the formula  $R_5-(C=O)-Halogen$  wherein  $R_5$  is unsubstituted or substituted lower alkyl;

e) in order to prepare a compound of formula I, in which  $R_2$  is a radical  $R_5-(C=Y)-NH-$  wherein  $R_5$  is lower alkyl substituted by a heterocyclic radical containing at least one nitrogen ring atom whereby the binding of the heterocyclic radical to lower alkyl occurs via a nitrogen ring atom, and  $Y$  is oxygen, a compound of formula V

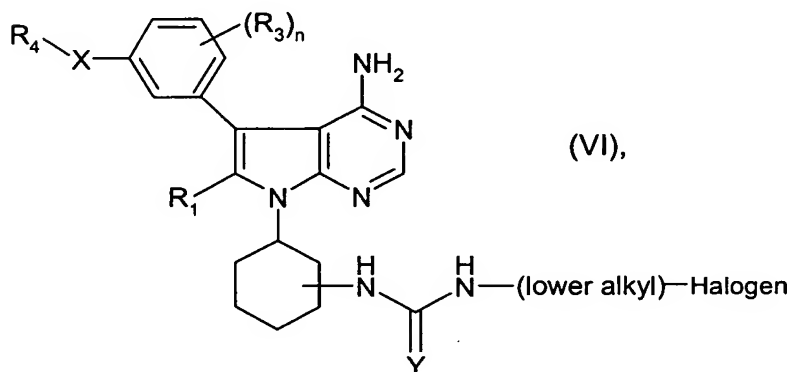


wherein  $n$ ,  $R_1$ ,  $R_3$ ,  $R_4$  and  $X$  have the meanings as defined for a compound of formula I, is reacted with a compound of the formula  $R_{11}-H$  in which  $R_{11}$  is a heterocyclic radical containing at least one nitrogen ring atom wherein the heterocyclic radical is attached to the hydrogen atom of  $R_{11}-H$  via a nitrogen ring atom;

f) in order to prepare a compound of formula I, in which  $R_2$  is a radical  $R_5-(C=Y)-NH-$  wherein  $R_5$  is unsubstituted, mono- or disubstituted amino or a heterocyclic radical containing at least one nitrogen ring atom whereby the binding of the heterocyclic radical occurs via a nitrogen ring atom and  $Y$  is oxygen, a compound of formula I, in which  $R_2$  is a radical  $R_5-(C=Y)-NH-$  wherein  $R_5$  is imidazol-1-yl and  $Y$  is oxygen, is reacted with a compound of the formula  $R_5-H$ , in which  $R_5$  is unsubstituted, mono- or disubstituted amino, or a heterocyclic radical which contains at least one nitrogen ring atom;

g) in order to prepare a compound of formula I, in which  $R_2$  is a radical  $R_5-(C=Y)-NH-$  wherein  $R_5$  is unsubstituted or monosubstituted amino and  $Y$  is oxygen or sulfur, a compound of formula I, in which  $R_2$  is amino, is reacted with a compound of the formula  $R_{12}-N=C=Y$  wherein  $Y$  is oxygen or sulfur, the radical  $R_{12}-NH-$  corresponding to unsubstituted or monosubstituted amino  $R_5$ ;

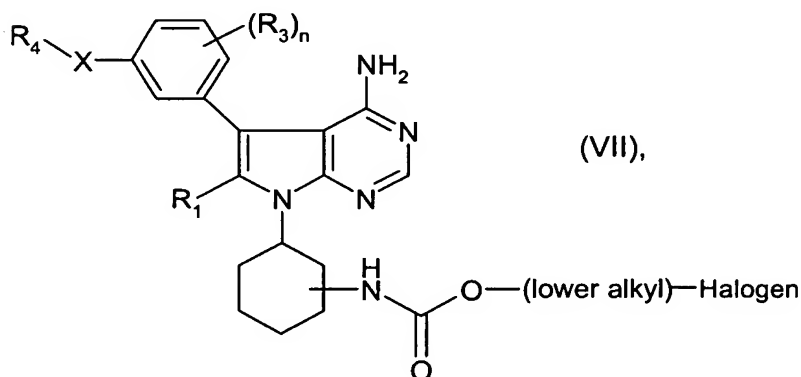
h) in order to prepare a compound of formula I, in which  $R_2$  is a radical  $R_5-(C=Y)-NH-$  wherein  $R_5$  is lower alkylamino wherein the lower alkyl moiety is substituted by unsubstituted, mono- or disubstituted amino or by a heterocyclic radical containing at least one nitrogen ring atom whereby the binding of the heterocyclic radical to the lower alkyl moiety occurs via a nitrogen ring atom and  $Y$  is oxygen or sulfur, a compound of formula VI



wherein Y is oxygen or sulfur and n, R<sub>1</sub>, R<sub>3</sub>, R<sub>4</sub> and X have the meanings as defined for a compound of formula I, is reacted with a compound of the formula R<sub>13</sub>-H, in which R<sub>13</sub> is unsubstituted, mono- or disubstituted amino or a heterocyclic radical containing at least one nitrogen ring atom wherein the heterocyclic radical is attached to the hydrogen atom of R<sub>13</sub>-H via a nitrogen ring atom;

i) in order to prepare a compound of formula I, in which R<sub>2</sub> is a radical R<sub>5</sub>-(C=Y)-NH- wherein R<sub>5</sub> is etherified hydroxy and Y is oxygen, a compound of formula I, in which R<sub>2</sub> is amino, is reacted with a compound of the formula R<sub>5</sub>-(C=O)-Halogen wherein R<sub>5</sub> is etherified hydroxy;

j) in order to prepare a compound of formula I, in which R<sub>2</sub> is a radical R<sub>5</sub>-(C=Y)-NH- wherein R<sub>5</sub> is lower alkoxy substituted by unsubstituted, mono- or disubstituted amino or by a heterocyclic radical containing at least one nitrogen ring atom whereby the binding of the heterocyclic radical to the lower alkyl moiety of lower alkoxy occurs via a nitrogen ring atom and Y is oxygen, a compound of formula VII



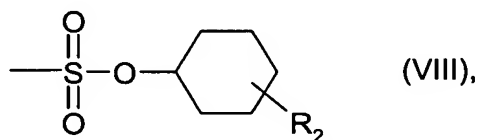
wherein n, R<sub>1</sub>, R<sub>3</sub>, R<sub>4</sub> and X have the meanings as defined for a compound of formula I, is reacted with a compound of the formula R<sub>14</sub>-H, in which R<sub>14</sub> is unsubstituted, mono- or disubstituted amino or a heterocyclic radical containing at least one nitrogen ring atom wherein the heterocyclic radical is attached to the hydrogen atom of R<sub>14</sub>-H via a nitrogen ring atom;

k) in order to prepare a compound of formula I, in which R<sub>2</sub> is a radical R<sub>6</sub>-sulfonylamino wherein R<sub>6</sub> has the meanings as defined above under formula I, a compound of formula I, in which R<sub>2</sub> is amino, is reacted with R<sub>6</sub>-sulfonyl halide;

l) in order to prepare a compound of formula I, in which R<sub>1</sub> is halogen, a compound of formula I, in which R<sub>1</sub> is hydrogen, is reacted with N-halosuccinimide;

m) in order to prepare a compound of formula I, in which R<sub>1</sub> is lower alkyl, a compound of formula I, in which R<sub>1</sub> is halogen, is reacted with tetra(lower alkyl) tin;

n) in order to prepare a compound of formula I, a compound of formula II, wherein n, R<sub>1</sub>, R<sub>3</sub>, R<sub>4</sub> and X have the meanings as defined for a compound of formula I, is reacted with a compound of formula VIII



wherein R<sub>2</sub> has the meanings as defined for a compound of formula I;

wherein functional groups which are present in the starting compounds of processes a) to n) and are not intended to take part in the reaction, are present in protected form if necessary, and protecting groups that are present are cleaved, wherein said starting compounds may also exist in the form of salts provided that a salt-forming group is present and a reaction in salt form is possible,

and, if so desired, a compound of formula I thus obtained is converted into another compound of formula I, a free compound of formula I is converted into a salt, an obtained salt of a compound of formula I is converted into the free compound or another salt, and/or a mixture of isomeric compounds of formula I is separated into the individual isomers.